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HIV Risk and Multiple Sources of Heterosexism Among Young Black Men Who Have Sex with Men

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Abstract

Objective—This study examined whether the association between social support and condom self-efficacy would be moderated by (1) internalized heterosexism among and (2) enacted heterosexism experienced by young Black men who have sex with men (YBMSM), who contend with high HIV incidence, heterosexism, and low uptake of pre-exposure prophylaxis.

Method—Participants were 1,210 YBMSM (ages 18–29) who completed measures of social support, internalized and enacted heterosexism, and condom self-efficacy in two large cities in the Southern U.S. as part of a community-level, HIV-prevention study.

Results—A significant, three-way interaction between social support and both hypothesized moderators, internalized and enacted heterosexism, showed that social support was positively associated with condom self-efficacy when both internalized and enacted heterosexism were high

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(one standard deviation above the mean) (b=0.177, $CI_{.95}$: 0.088, 0.266). However, social support was not associated with condom self-efficacy when scores were low (one standard deviation below the mean) on both internalized and enacted heterosexism (b=0.024, $CI_{.95}$: −0.054, 0.101), low on internalized and high on enacted heterosexism (b=0.058, $CI_{.95}$: −0.061, 0.117), or high on internalized and low on enacted heterosexism (b = 0.039, $CI_{.95}$: −0.083, 0.161).

Conclusions—YBMSM who are high in both internalized and enacted heterosexism may see greater benefits from social support on condom self-efficacy than YBMSM who grapple with less heterosexism. In addition to promoting social support, interventions should aim to assess and reduce multiple forms of stigma.

Keywords

young black MSM; heterosexism; social support; condom self-efficacy; HIV prevention

Although Black men who have sex with men (MSM) represent 14% of the MSM population, they comprise approximately 37% of new HIV infections among MSM (Prejean et al., 2011). Among young Black MSM (YBMSM under age 30), HIV incidence is over four times as high as it is among Black MSM aged 30 years and older (Koblin et al., 2013). Moreover, HIV prevalence is estimated to be as high as 30% among Black MSM in metropolitan statistical areas such as Dallas, TX, New York, NY, Atlanta, GA,, Los Angeles CA, and Miami, FL (Lieb et al., 2011; Smith et al., 2010). Yet YBMSM are less likely than other MSM to be aware of (Strauss et al., 2017) or have used (Hoots, Finlayson, Nerlander, Paz-Bailey, & Study, 2016) pre-exposure prophylaxis (PrEP), which is the prescribed use of antiretroviral therapy by HIV-negative persons to prevent HIV seroconversion and reduce HIV incidence (Grant et al., 2010). For example, in a diverse sample of over 6,000 MSM who were eligible for PrEP across 20 U.S. cities, Black MSM were half as likely as White MSM to have used PrEP in the past 12 months (2.5% vs. 5.3%) even though there was no significant difference between Black and White MSM in willingness to take PrEP (58.9% vs. 59.7%) (Hoots et al., 2016). For YBMSM, barriers to PrEP include cost and access to healthcare (Crosby, Geter, DiClemente, & Salazar, 2014; Kelley et al., 2015), race-conscious medical mistrust (Eaton et al., 2014), and the fear of being stigmatized as “promiscuous” or ‘risk-taking” (Mutchler et al., 2015). Thus, in the age of PrEP, condomless sex and its correlates remain critical to HIV prevention efforts with YBMSM.

However, behavioral interventions that promote condom use may be insufficient if YBMSM do not believe that they are capable of successfully utilizing condoms in potentially risky sexual situations (i.e., if they lack *condom self-efficacy*) (Bandura, 2004). Condom self-efficacy is a well-established predictor of condom use (Armitage & Conner, 2001; Klein, 2013; Sheeran, Abraham, & Orbell, 1999), and many sexual-risk reduction and HIV prevention interventions have been conceptualized, designed, and studied that incorporate increases in condom self-efficacy as a key mechanism of behavior change (DiClemente et al., 2008; Herbst, Painter, Tomlinson, & Alvarez, 2014). These include interventions tailored to YBMSM (e.g., HealthMpowerment.org) (Hightow-Weidman et al., 2015). In light of this emphasis on self-efficacy in such interventions, a greater understanding of the conditions that facilitate self-efficacy is needed.

Social support (e.g., guidance, advice, emotional support) (Bandura, 2004) from friends may be critical in reducing the risk of HIV transmission among YBMSM (Brady, Dolcini, Harper, & Pollack, 2009; Peterson & Jones, 2009), as it helps individuals to develop their self-efficacy to engage in health promoting behaviors (e.g., condom use, negotiated safety) (Bandura, 2004). Greater peer support is linked to high condom self-efficacy for using condoms (Lawrence, Brasfield, Jefferson, Allyene, & Shirley, 1994; Volkmann et al., 2014), and, in turn, condom self-efficacy has been shown to mediate the association between social support from peers and condom use (Bandura, 2004; Wulfert & Wan, 1993). Both well-established and newer interventions have leveraged peer support to improve self-efficacy as a key mechanism of action to reduce sexual-risk behavior among MSM (e.g., Bryan, Robbins, Ruiz, & O'Neill, 2006; Hays, Rebchook, & Kegeles, 2003; Hidalgo et al., 2015; Kegeles, Hays, & Coates, 1996; Wilton et al., 2009). However, further study is merited to understand the conditions under which social support might be helpful, unhelpful, or even detrimental.

A potentially important moderator of the effect of social support on condom self-efficacy is heterosexism, which is "the negative regard, inferior status, and relative powerlessness that society collectively accords to any nonheterosexual behavior, identity, relationship, or community" (pp. 906–907, Herek, 2007). This may take the form of *enacted heterosexism*, which reflects sexual minorities' experience of low regard or discrimination by heterosexuals in the community (e.g., social ostracism, discrimination) (Herek, 2007), or *internalized heterosexism*, which is when sexual minorities learn, internalize, and adhere to these negative attitudes about their own and others' sexual-minority identities or nonheterosexual behaviors and relationships (Diaz, Ayala, & Bein, 2004; Herek, 2007; Stall, Friedman, & Catania, 2008).

Prior studies have suggested without empirical support that enacted and internalized heterosexism may attenuate any association between social support and condom self-efficacy (Garcia et al., 2016; Meyer, 2003). For example, heterosexism-affected YBMSM may not feel worthy of support due to internalized heterosexism (Bird & Voisin, 2013; Voisin, Bird, Shiu, & Krieger, 2013). Alternatively, they may not seek support because they are too concerned about the potential for enacted heterosexism resulting from disclosing their sexual identity or behaviors to friends or family (Bird & Voisin, 2013; Voisin et al., 2013). Furthermore, YBMSM may fear disclosing challenges that they have with using condoms out of concern that others, including their YBMSM peers, may assume that they are interested in condoms because they are "promiscuous" or HIV-positive (Arnold, Rebchook, & Kegeles, 2014).

Heterosexism may be a more critical risk factor for Black MSM than other groups of MSM. Unlike racism, YBMSM face heterosexism both outside of and within the Black community and within their own families (Arnold et al., 2014; Hill, 2013). Within this context, enacted heterosexism is more strongly associated with sexual-risk behavior among Black MSM than it is with sexual-risk behavior among other MSM (Jeffries, Marks, Lauby, Murrill, & Millett, 2013; Peterson & Jones, 2009). Black MSM also report higher levels of internalized heterosexism than MSM of other racial or ethnic groups (Kennamer, Honnold, Bradford, & Hendricks, 2000; Montgomery, Mokotoff, Gentry, & Blair, 2003). This internalized

heterosexism is negatively associated with condom self-efficacy and positively associated with inconsistent condom use (Huebner, Davis, Nemeroff, & Aiken, 2002; Peterson & Jones, 2009).

The Present Study

Social support appears to be a critical element in promoting condom self-efficacy and, thus, reducing HIV risk. However, the size and direction of the association between social support from friends and condom self-efficacy may depend on the extent to which YBMSM jointly experience enacted heterosexism and internalized heterosexism. Currently, there is little empirical research to test this hypothesis. Understanding these issues may have implications for peer support, group-based, and stigma-reduction interventions.

This study used a serial, cross-sectional design in which survey data were collected annually over several years in two communities. Thus, unique participants were not repeated or followed over time. Although this design has obvious limitations for firmly establishing causality and directionality of effects, these specific questions regarding social support, multiple levels of minority stress as reflected by heterosexism, and self-efficacy for YBMSM have never been asked using any design. Moreover, very few previous studies have successfully followed a large cohort of Black MSM other than those who are in care for HIV. Significant barriers to recruiting and retaining a large, representative cohort of this population include suspicion regarding research, stigma around sexual-orientation and HIV, and secrecy and fear of discovery (Arnold et al., 2014; Wilson et al., 2015; Wilton, 2009). Additional barriers to retention in cohorts include disproportionate levels of structural barriers such as unstable housing among and incarceration of Black MSM (Hussen et al., 2015; Millett et al., 2012). Thus, the men who are willing to be recruited and can be successfully followed over time in a longitudinal cohort of YBMSM are unlikely to represent the true population of YBMSM, including those at greatest risk of HIV infection.

We hypothesize that social support from friends, enacted heterosexism, and internalized heterosexism will interact in predicting condom self-efficacy such that greater social support from friends will be associated with higher condom self-efficacy among YBMSM, depending on levels of both enacted heterosexism and internalized heterosexism. Given the exploratory nature of these analyses, we did not hypothesize the direction or significance of the association between social support from friends and condom self-efficacy for the four combinations of high versus low enacted and internalized heterosexism.

Method

Participants

Data for these analyses were collected from a larger community-level HIV prevention study of YBMSM in Dallas and Houston, TX. Assessments consisted of the first two independent, cross-sectional samples surveyed one year apart in each community prior to implementation of the intervention. These two waves were combined for this study. Eligibility criteria were as follows: (1) being between the ages of 18–29, (2) being Black or African American, (3)

living in either the Dallas or Houston metropolitan areas, (4) being able to complete the survey in English, and (5) having had sex with another man in the past 12 months.

Recruitment—This study used a modified venue-based time-location sampling approach adapted from the National HIV Behavioral Surveillance Survey (MacKellar et al., 2007) to collect the samples. First, venues and sampling periods were selected to maximize representation and efficiency in sampling for four-hour sampling time periods during recruitment. Second, based on the well-established approach of time-location sampling used to recruit MSM in community-based survey research (MacKellar et al., 2007), at least eight YBMSM had to be present at the venue at the beginning of the sampling period in order for data collection to proceed. This requirement ensures that recruitment proceeds efficiently without expending resources on venues unlikely to yield many participants. At least two research staff needed to be placed in venues that would recruit enough participants to complete the study. No more than 20 surveys were collected at any venue during a sampling time period. A variety of venues were eligible, including bars, clubs, retail outlets, restaurants and cafes, adult bookstores, bathhouses, high-traffic street locations, religious organizations, parks, and other social settings. However, most of the recruitment (92.6%) occurred at bars and clubs. The remaining occurred at the project offices at a major university (7.0%) and a community agency that provides support services to youth (0.4%).

Procedures

At each recruitment venue, potential participants were consecutively approached and screened based on the previously described criteria for eligibility. Of all the men who were approached, 92% agreed to be screened and, of those who were screened and eligible, 94% agreed to participate in the study. Participants provided verbal informed consent after the research assistant explained the study and offered to answer any questions. Participants were given an informed-consent sheet with more detail about, and contact information for, the study. Participants were told at the outset that the survey would take approximately 25 minutes to complete. In an effort to enhance privacy, the researchers had participants complete the survey using hand-held personal digital assistants (PDAs) that presented written questions sequentially and allowed participants to respond directly on the devices. When more than one participant was completing the survey at a given time, they were asked not to talk to each other about the survey and that the researchers wanted each participant to share his own thoughts when responding. The use of methods such as PDA-based responding has been shown to improve participants' reporting of ostensibly socially undesirable behaviors (e.g., sexually risky sexual behaviors, illicit substance use) (Gorbach et al., 2013). Although surveys were completed anonymously, each participant provided several pieces of information (e.g., first letter of mother's first name) that allowed the researchers to create a unique identifier for tracking repeat responders within and across waves so that any second surveys could be deleted. On average, the survey took 24 minutes (interquartile range 17–29 min.) to complete. Participants were compensated $30 for completing any part of the assessment. All study procedures were approved by the institutional review boards at the principal investigator's home institution, the institution of the data collection subcontractor in each geographic area, and the CDC.

Measures

Measures of eight binary control variables representing geographic area and socioeconomic distress were included. Additionally, the following continuous variables were measured: three interacting predictor variables (i.e., social support from friends, internalized heterosexism, enacted heterosexism) and the outcome variable of condom self-efficacy.

Geographic area—The metropolitan statistical area in which the participants were recruited, Dallas or Houston, was recorded by the study researchers. For the present analyses, Dallas was coded as zero and Houston was coded as one. Approximately half of participants were recruited in Dallas (52.3%).

Socioeconomic distress—This study used seven, independent items as respective measures, or indicators, of socioeconomic status or distress among YBMSM: (1) not having a high school degree or GED, (2) not currently being employed full time, (3) having a personal annual income of less than $20,000, (4) running out of money in at least one month out of the past 12 months, (5) having to borrow money to meet basic needs during the past year, (6) ever being incarcerated, and (7) ever being homeless (Huebner et al., 2014; Scott et al., 2014). Each was coded zero for participants to whom the item did not apply and one for participants to whom the item did apply. On average, participants claimed 2.80 (standard deviation [SD] = 1.79, range = 0 – 7) of the seven indicators of socioeconomic distress.

Social support from friends—We assessed participants' general perceptions of social support from friends with a four-item subscale from a 12-item scale of perceived social support (Dahlem, Zimet, & Walker, 1991), which has been validated with urban, African American youth (Canty-Mitchell & Zimet, 2000). Sample items include, "My friends really try to help me if I need it," and "I can talk about my problems with my friends." Response options ranged from 1 ("disagree strongly") to 6 ("agree strongly"), with higher scores reflecting greater social support. The measure shows validity higher scores are associated with increased depression (Clara, Cox, Enns, Murray, & Torgrudc, 2003) and scores on the measure can be distinguished from scores on social support from family and from significant others (Canty-Mitchell & Zimet, 2000). Cronbach's alpha coefficient for this measure was 0.91, which was consistent with what was previously reported for the 12-item scale (α = 0.93).

Internalized heterosexism—We used three items that were used in prior studies by our research group (Hays et al., 2003; Kegeles et al., 1996) and that were originally adapted from the work of Nungesser (1983) to assess this construct. Sample items include, "Does having sex with other men make you dislike yourself?" and "Do you ever wish that you were attracted only to women?" Scores on individual items ranged from 1 ("not at all") to 5 ("a great deal" or "extremely"), with higher scores representing more internalized heterosexism. The measure shows validity in that higher scores are associated with negative affect such as sadness, anger, and disgust (Johnson, Carrico, Chesney, & Morin, 2008), low self-esteem (Nungesser, 1983), and enacted heterosexism (Huebner et al., 2014). Internal consistency for this measure in the present sample was 0.73, which is similar to what was found in previous research (α = .0.70).

Enacted heterosexism—Participants' experience of enacted heterosexism from others in the prior 12 months was measured using seven items adapted from a longer, 11-item scale developed by Diaz et al. (2004). Sample items include, "In the past year, how often were you made fun of or called names for being effeminate ("girly") or for being attracted to other men (or gay or bisexual)?" and "In the past year, how often did you hear that gay people are sinners?" Likert-type response options ranged from 1 ("never") to 5 ("very often"), with higher scores indicating more frequent experiences of enacted heterosexism. The measure shows validity in that higher scores are associated with psychological distress (Diaz et al., 2004) and internalized heterosexism (Huebner et al., 2014). Internal consistency ($\alpha = 0.80$), is slightly better than prior literature ($\alpha = .0.75$).

Condom self-efficacy—Condom self-efficacy was measured by a four-item version of a condom self-efficacy scale developed with a focus on HIV risk reduction in MSM populations (Fisher, Fisher, Williams, & Malloy, 1994; Hays, Kegeles, & Coates, 1990). Sample items include, "If a man you are having sex with starts to do something unsafe, how difficult is it for you to stop him?" and "How difficult is it for you to let a male sex partner know that you want to have safe sex?" Participants responded using a five-point, Likert-type scale ranging from 1 ("not at all difficult") to 5 ("extremely difficult"). All four items were reverse-coded so that higher scores indicated greater self-efficacy. The measure shows validity such that higher scores are associated with greater motivation to engage in safer-sex behaviors and with safer-sex and HIV-preventive behaviors such as condom use (Fisher et al., 1994). Cronbach's alpha for this measure was 0.82, and, in prior research, this value was at least 0.67 for the original measure.

Overview of Data Analyses

Multiple linear regression analysis was used to assess how well a saturated model of the three predictors (i.e., social support, internalized heterosexism, enacted heterosexism, their two- and three-way interaction terms) accounted for a significant amount of variance in self-efficacy after controlling for indicators of geographic area and socioeconomic distress. Given a significant three-way interaction, the statistical significance, valence, and magnitude of the association between social support and self-efficacy were determined under each of the following conditions: (1) high internalized and enacted heterosexism; (2) high internalized heterosexism, but low enacted heterosexism; (3) low internalized heterosexism, but high enacted heterosexism; and (4) low internalized and enacted heterosexism. Specifically, simple slopes for the association between social support and self-efficacy were tested at high and low levels of internalized and enacted heterosexism to determine if they were statistically significantly different from zero (Aiken, West, & Reno, 1991). A high level was defined as one SD above the variable mean, and a low level was defined as one SD below the variable mean (Aiken et al., 1991). Under each of the four conditions, the effect size ($r_{partial}$) for the association between social support and self-efficacy was assessed to indicate the magnitude of the effect. Scores for all predictor variables and the outcome variable were log-transformed upon screening for skew and kurtosis (see Table 1) and standardized (mean=0, SD=1) prior to entry into the model.

Results

Preliminary Analyses

Among the initial sample of 1,329 surveys, 80 came from men who participated in both of the assessments; only their first assessments were used. Of the 1,289 participants, 70 (6%) did not have complete data on the variables of interest. Thus, the final sample for analysis consisted of 1,210 YBMSM. Demographic characteristics of the sample and descriptive statistics of study variables are presented in Table 1. A residual-versus-fitted plot indicated that the assumptions of linearity and homoscedasticity for multiple linear regression analysis were appropriate. The value of the variance inflation factor (VIF), 1.46, indicated that collinearity was not an issue in these analyses (Cohen, Cohen, West, & Aiken, 2003).

Primary Analyses

The saturated model (see Table 2) with covariates, predictors, and interaction terms accounted for a significant amount of variance in self-efficacy ($R^2_{adjusted} = 0.31$, $R^2 = 0.32$, $p < 0.001$). The three-way interaction term (i.e., social support * internalized heterosexism * enacted heterosexism) was statistically significant ($b = 0.001$, $SE = <0.001$, $p < 0.010$, $CI_{.95}$: <0.001, 0.001). Thus, the significance of the association between social support and self-efficacy depended on the level of both internalized and enacted heterosexism when adjusting for geographic and socioeconomic factors.

Further examination of this three-way interaction yielded the following results as illustrated in Figure 1. When scores were one SD above the mean in both internalized and enacted heterosexism, each point increase in social support was associated with a 0.177-point increase in self-efficacy ($b = 0.177$, $SE = 0.045$, $p < 0.001$, $CI_{.95}$: 0.088, 0.266, $r_{partial} = 0.112$). However, there was no significant association between social support and self-efficacy when scores were one SD below the mean in both internalized and enacted heterosexism ($b = 0.024$, $SE = 0.040$, $p = 0.549$, $CI_{.95}$: −0.054, 0.101, $r_{partial} = 0.017$), one SD below the mean in internalized heterosexism and one SD above in enacted heterosexism ($b = 0.058$, $SE = 0.061$, $p = 0.339$, $CI_{.95}$: −0.061, 0.117, $r_{partial} = 0.028$), or one SD above the mean in internalized heterosexism and one SD below the mean in enacted heterosexism ($b = 0.039$, $SE = 0.062$, $p = 0.528$, $CI_{.95}$: −0.083, 0.161, $r_{partial} = 0.0182$). Thus, in contrast to when scores on both internalized and enacted heterosexism were high, a point increase in social support was not associated with a significant change in self-efficacy when scores on either internalized or enacted heterosexism or both were low. The unique variance accounted for in self-efficacy by social support in each of the four models ($\Delta R^2 = 0.007$, $p = 0.002$) evidenced an achieved statistical power of $(1 - \beta) = 0.84$ across all four combinations of low versus high internalized and enacted heterosexism.

Finally, the Y-intercepts for social support at high and low levels of internalized and enacted heterosexism were examined in the model. The Y-intercepts in these analyses reflected the standardized scores on self-efficacy when the standardized scores on social support were equal to zero. Because the study variables were standardized, zero values were equal to average levels of these variables. As such, when scores on social support were at average levels, scores on self-efficacy were (1) at *average* levels when both internalized and enacted

heterosexism were high ($b = -0.148$, $SE = 0.089$, $p = 0.095$, $CI_{.95} = -0.322, 0.026$) and (2) at *above average* levels when internalized heterosexism was high and enacted heterosexism was low ($b = 0.580$, $SE = 0.095$, $p < 0.001$, $CI_{.95} = 0.393, 0.768$) or vice versa ($b = 0.376$, $SE = 0.099$, $p < 0.001$, $CI_{.95} = 0.182, 0.571$) and when both internalized and enacted heterosexism were low ($b = 0.653$, $SE = 0.081$, $p < 0.001$, $CI_{.95} = 0.495, 0.812$).

Discussion

To our knowledge, this is the first study to empirically and simultaneously test whether the association between social support from friends and condom self-efficacy, a well-established indicator of HIV-risk behavior among MSM (Armitage & Conner, 2001; Klein, 2013; Sheeran et al., 1999), depends on the levels of more than one type of stigma (i.e., internalized and enacted heterosexism) that an individual might experience at any given time. YBMSM who may benefit most from social support are those who both (1) internalize negative attitudes about their sexual identity or behavior and (2) find themselves in highly stigmatizing social contexts. This is especially important for YBMSM, who often experience enacted heterosexism outside of, as well as within, the Black community (Glick & Golden, 2010; Sheeran et al., 1999) and also report higher levels of internalized heterosexism than MSM of other racial or ethnic groups (Kennamer et al., 2000; Montgomery et al., 2003).

The present findings indicate that the benefits of social support may be more striking for YBMSM who both (1) strongly accept negative attitudes about them and (2) experience more frequent heterosexist situations partly because they have low levels of condom self-efficacy to begin with. Specifically, YBMSM who reported high levels of both types of heterosexism also reported low levels of condom self-efficacy, compared to YBMSM who do not report high levels of both types of heterosexism. Thus, YBMSM who do not internalize heterosexism, or who do not experience a great amount of enacted heterosexism, or both, may be sufficiently resilient and have high enough condom self-efficacy so that they may not benefit much further from additional social support from friends.

Although this study has a number of strengths, there are several limitations. One limitation is the cross-sectional design of this study. This design precludes any definitive interpretations regarding causal or temporal relations between the variables. In addition, the sampling strategy in this study does not produce a representative, probability sample. However, this sampling strategy is among the most feasible methods that are currently available to reach high-risk YBMSM, given the multiple barriers to enrolling them in a longitudinal cohort. These barriers include cultural fears about participating in research, stigma around HIV, stigma toward being identified as gay or bisexual, incarceration, and lack of stable housing (making tracking participants difficult). (Kegeles et al., 1996; Wilson et al., 2015; Wilton, 2009). We did not solicit input from community members regarding study design, instead relying on methods established in prior research (e.g., National HIV Behavioral Surveillance Survey, time-location sampling) (MacKellar et al., 2007).

Over 90% of the sample was recruited at bars and clubs, which may introduce sampling or response bias. The study likely missed YBMSM who infrequently attend bars or nightclubs. Participants recruited from these settings might have different profiles of sexual experience,

self-efficacy, and support than men who would be found exclusively in other settings (e.g., college or religious events). Further research is needed to determine the potential bias involved in recruitment of YBMSM from relatively convenient locations like bars and clubs. Additionally, our methods allowed men to complete surveys nearby one another, and although men completed surveys using personal handheld devices and were instructed not to talk, it is possible that the proximity to friends or peers affected men's responses.

Peer support specific to condom use was not assessed in this study, and there is an existing literature that highlights the importance of this specific type of peer support as well as of social norms for influencing condom use (Fisher, Fisher, Bryan, & Misovich, 2002; Sheeran et al., 2015; Starling et al., 2014). Also, longer, multidimensional measures would have provided a more nuanced view of the concepts and associations described in the present study. However, using briefer measures improved the feasibility of the study for recruiting large, socioeconomically diverse sample of YBMSM. In this tradeoff, the primary goal was to ensure the sample included men who are infrequently included in the research literature.

There are several implications and future directions to be considered in light of these results. Service providers and intervention researchers should note that the effects of interventions to reduce behavioral vulnerability to HIV risk may be most effective for participants who are struggling with both internalized and externally imposed oppression. Additionally, mental health practitioners who are limited to individual-level or small-group intervention approaches may help YBMSM to 1) cope with hearing stigmatizing statements or experiencing social ostracism or discrimination, 2) learn to examine stigmatizing attitudes without accepting them, and 3) leverage their friends as sources of comfort and affirmation when experiencing stigmatizing situations in order to reduce behavioral risks. Also, existing stigma-reduction interventions typically focus on external sources of stigma (Brown, Macintyre, & Trujillo, 2003; Sengupta, Banks, Jonas, Miles, & Smith, 2011), and more work is required to jointly address internalized and enacted forms of stigmas such as heterosexisms. Moreover, there should be continued advocacy for policy changes that counteract structural and institutional heterosexism, and social-marketing efforts should continue to aim to reduce levels of heterosexism in the social contexts in which YBMSM live. Structural forms of heterosexism create the foundation for enacted heterosexism toward non-heterosexuals in general and YBMSM in particular.

Finally, researchers should be mindful to assess multiple sources or types of stigma (e.g., internalized and enacted heterosexism) simultaneously among YBMSM. Although researchers have recently begun to examine both internalized and externally experienced or structural sources of heterosexism (Huebner et al., 2014; Millett et al., 2012; Scott et al., 2014), future research should further explore the interaction of these multiple forms of heterosexism for potential moderating effects on risk and protective factors as well as on intervention effectiveness.

The impact of HIV infection on YBMSM borders on catastrophic (Koblin et al., 2013; Prejean et al., 2011; Wejnert et al., 2015). Social support may be particularly important in reducing the risk of HIV transmission among YBMSM who are struggling with internalized negative attitudes toward their sexual identity or behaviors and with sexually stigmatizing

social contexts that fuel these negative attitudes. At the very least, self-efficacy to respond to these risks might be improved. It may be difficult to reduce both internalized and external sources of heterosexism at equivalent rates, but providers and researchers have an opportunity to identify and focus on specific types and sources of heterosexism. As community psychologist Weick (1984) noted, although many social problems appear so large in scale as to be insurmountable, practitioners and advocates may find it beneficial to tackle smaller problems (e.g., individual-level manifestations of heterosexism) in the service of eventually ameliorating larger-scale social ills (e.g., continued heterosexism in communities and in public policy).

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Public Health Significance Statement

Young Black men who have sex with men (YBMSM) are among the most devastated by HIV in the United States, as indicated by dire rates of HIV incidence and prevalence rates in this population. YBMSM who struggle simultaneously with 1) negative attitudes or treatment by other people because of their sexual identity or behavior and 2) negative attitudes they internalize about themselves may have a diminished sense of agency in protecting their own health via condom use. Supportive interventions, particularly those involving peer-based support, should include nuanced considerations of multiple forms and sources of stigma as well as ways of identifying and reaching those who struggle most with stigma.

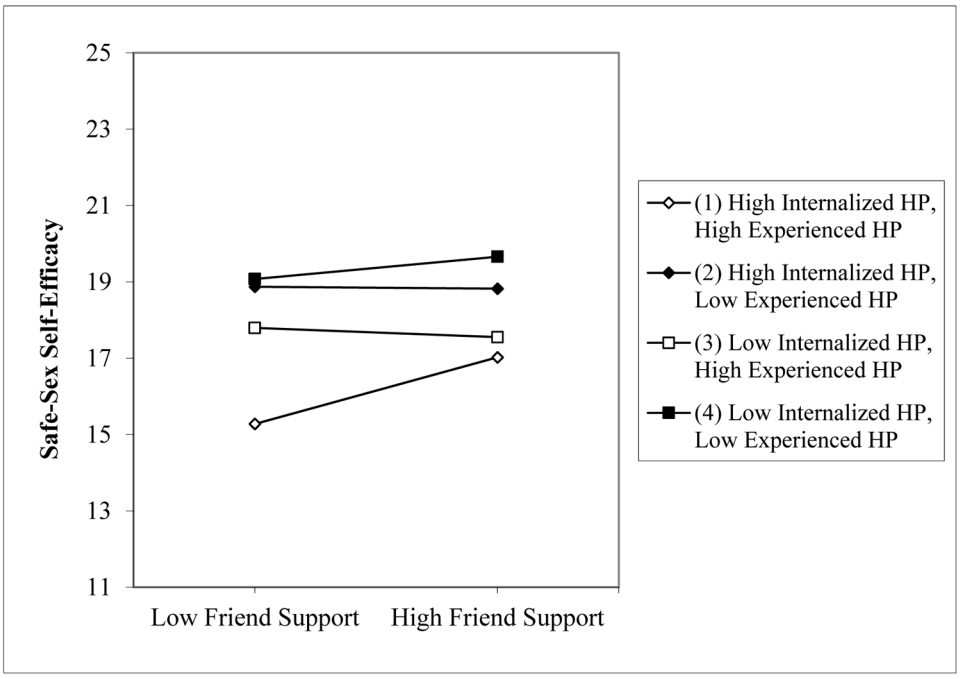

Figure 1.

Plot of regression lines depicting the interactive associations between social support from friends, internalized homophobia, experience of homophobia, and safe-sex self-efficacy when holding constant recruitment city and indicators of socioeconomic distress.

Table 1

Participant Characteristics (N=1,210) and Descriptive Statistics

Variable	Descriptive Statistics
Geographic area (%)	
Dallas	52.32
Houston	47.68
Mean age in years (SD)	3.04
Education (%)	
Less than high school diploma or GED	26.80
High School Diploma or GED	38.75
Some college	22.91
College degree or more	11.54
Annual income (%)	
Less than $10,000	31.93
$10,000 – $19,999	21.48
$20,000 – $39,999	29.23
$40,000 – $59,999	13.56
$60,000 or more	3.79
Not currently employed full time (%)	17.86
Running out of money at least once in the past year (%)	18.20
Borrowed money to meet basic needs during the past year (%)	10.95
Ever been incarcerated (%)	5.48
Ever been homeless (%)	1.77

	Mean (SD)	Range	Skew/SE*	Kurtosis/SE*
Social support from friends	18.59 (5.62)	4 – 24	−12.42	−1.24
Internalized heterosexism	6.84 (3.21)	3 – 15	8.52	−4.10
Enacted heterosexism	16.46 (5.94)	7 – 34	5.81	−1.77
Condom self-efficacy	16.70 (3.64)	4 – 20	−14.91	2.24

Note. SD = standard deviation.

*Values were calculated by dividing the skew or kurtosis statistic by its standard error.

Table 2

Multiple Linear Regression Model of Social Support from Friends, Internalized Heterosexism, Enacted Heterosexism, and their Interactions Predicting Condom Self-Efficacy

Variable	*b*	*SE*	*p*	$CI_{0.95}$	ΔR^2
Intercept	0.366	0.078	<0.001	0.214, 0.519	
City	−0.200	0.051	<0.001	−0.300, −0.101	
No high school degree or GED	−0.049	0.097	0.611	−0.240, 0.141	
Not employed full time	−0.074	0.095	0.434	−0.260, 0.112	
Annual income of less than $20,000	−0.256	0.094	0.006	−0.440, −0.072	
Ran out of money	−0.373	0.095	<0.001	−0.559, −0.187	
Borrowed money	−0.231	0.108	0.032	−0.443, −0.019	
Ever incarcerated	−0.648	0.132	<0.001	−0.908, −0.388	
Ever homeless	−1.048	0.198	<0.001	−1.437, −0.660	
SSF[a]	0.058	0.027	0.035	0.004, 0.112	0.007
IH[b]	−0.133	0.029	<0.001	−0.189, −0.077	0.061
EH[c]	−0.227	0.029	<0.001	−0.284, −0.170	0.044
SSF * IH	0.003	0.002	0.101	−0.001, 0.006	0.006
SSF * EH	0.001	0.001	0.308	−0.001, 0.003	0.002
IH * EH	−0.005	0.001	<0.001	−0.007, −0.002	0.013
SSF * IH * EH	0.001	<0.001	0.010	<0.001, 0.001	0.004

Note. N = 1,210. $R^2_{adjusted}$ = 0.23, $F(15, 1194) = 24.68$, $p < 0.001$. The combined contribution of all four interaction terms to the model was $\Delta R^2 = 0.025$.

[a]SSF = social support from friends,

[b]IH = internalized heterosexism,

[c]EH = enacted heterosexism